Chapter 7 Index

A affected environment, defined 3-1 air quality 1-4, 1-21, 2-12, 2-31, 3-9, 3-10, 4-6, 4-7, 4-8, 4-9, 4-15, 4-17, 4-18, 4-20, 4-52, 4-59, 5-4, 5-5, 5-11, Alternating Gradient Synchrotron (AGS) 1-9, 1-12, 3-4, 3-18, 3-21, 4-47, 4-49, 4-52, 4-53, 4-54, 4-56, 4-57, 4-58 aquatic resources 2-16, 3-31, 3-38, 4-16, 4-18, 4-19, 4-20, 4-21 archaeological sites 3-42, 3-43, 3-44 artifacts 3-42 Associated Universities, Inc. 3-44	Brookhaven, town of 1-6, 3-2, 3-3, 3-5, 3-43, 3-50 C Clean Air Act (CAA) 3-9, 3-10, 4-31, 4-34, 4-38, 5-5 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 1-2, 1-5, 1-25, 1-26, 3-12, 3-18, 3-21, 4-9, 4-10, 4-11, 4-12, 4-51, 5-3, 5-6, 5-7, 5-10 Cosmotron 1-9 cultural resources 2-17, 3-1, 3-43, 3-44, 4-23, 4-61, 5-2
Basic Energy Sciences Advisory Committee 1-3 Brookhaven Accelerator Facility (BAF) 4-52, 4 53, 4-54, 4-56, 4-57, 4-58 Brookhaven Center for Imaging and Neuroscience 1-12 Brookhaven Graphite Research Reactor (BGRR) 1-9, 4-57 Brookhaven Linac Isotope Producer (BLIP) 1- 9, 3-58 Brookhaven National Laboratory (BNL) buildings onsite 3-4, 3-5, 3-7, 3-58, 3-68, 3-70, 5-1, 5-4 core missions 1-11 established 1-9, 3-43, 3-44 Final Environmental Impact Statement (ERDA-1540) 1-6 history 1-8 knowledge transfer (as a core mission) 1-11, 1-12 land use categories onsite 3-3 location of 1-10, 1-11 regulatory compliance 3-68, 5-1, 5-2, 5-3, 5-4 research facilities (as a core mission) 1-11 residences onsite 3-5 scientific research (as a core mission) 1-11, 2- 3 technology development (as a core mission) 1- 11, 1-12	Department of Energy (DOE) decontamination and decomission (D&D) 2-3, 2-4, 2-8, 2-9, 2-11, 2-14, 2-18, 2-27, 4-2, 4-9, 4-13, 4-14, 4-21, 4-25, 4-27, 4-28, 4-42, 4-45, 4-47, 4-48, 4-49, 4-51, 4-57, 4-58, 4-59, 4-60 Department of Energy (DOE) cooperation with EPA, NYSDEC, SCDHS 1-5, 1-6, 1-23, 1-26, 1-27, 3-17, 3-68, 5-2, 5-3, 5-6, 5-8 decision process about HFBR 1-1, 1-2, 1-3, 1-5, 1-6, 2-1, 2-10, 3-24, 4-10, 4-11 Federal and New York State agency agreements 1-5, 1-26, 1-27, 3-17, 3-21, 3-68, 5-2 focus on environmental issues 1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-11, 1-23, 1-25, 2-5, 2-6, 2-7, 2-8, 2-9, 3-20, 3-21, 3-23 initiates Tritium Remediation Project (TRP) 1-23, 1-25, 3-22, 5-3 Orders 1-22, 3-17, 3-58, 3-69, 3-70, 4-31, 4-34, 4-38, 5-1, 5-2, 5-9 permits and consultations 2-16, 5-2,5-3, 5-6, 5-8 relationship with BNL 1-1, 3-25, 3-54, 5-1, 5-3 drinking water standard 1-2, 1-23, 1-25, 1-26, 1-27, 2-14, 3-17, 3-21, 3-22, 3-23, 3-24, 3-25, 3-65, 4-10, 4-11, 4-12, 4-16, 4-18, 4-20, 4-55, 5-3

\mathbf{E}	
ecological resources 3-31. 3-32, 4-16, 4-21	Н
emergency classification 3-66	hazardous waste 1-5, 1-6, 1-7, 1-8, 3-8, 3-69, 3-
emergency response plans 3-60, 3-66,	71, 4-38, 4-39, 4-40, 4-41, 4-57, 5-3, 5-4, 5-6, 5-
employment, effects of HFBR 3-46, 3-47, 4-24,	12
4-25	Hazardous Waste Management Facility
endangered species 3-31, 3-39, 3-40, 4-19, 4-20,	(HWMF) 3-4, 3-8, 3-18, 3-19
4-21, 4-18, 5-2	heavy water (D ₂ O) 1-12, 1-14, 1-18, 1-22, 1-24,
Environmental Impact Statement (EIS)	2-3, 2-7, 3-23, 3-56. 4-6, 4-39, 4-40
direction for 1-1, 1-2, 1-3, 1-4, 1-5, 2-10, 4-59,	High Flux Beam Reactor (HFBR)
4-60, 4-61, 5-2	achievements 1-15, 1-16
process 1-1, 1-2, 1-3, 1-4, 1-5, 2-10, 5-2	alternatives considered 1-1, 1-3, 1-4, 1-5; 1-26,
organization of 5-3	2-1, 2-2, 2-3
environmental justice 3-72, 3-73, 4-50	alternatives considered but not analyzed 2-4,
Environmental statutes, regulations and	2-5, 2-6
Executive Orders 1-1, 1-2, 1-3, 1-7, 2-1, 2-2,	alternatives compared 2-8, 2-9-2-31
2-3, 2-5, 2-7, 2-8, 2-10, 3-9, 3-10, 3-26, 3-42,	cancer research 1-15
3-52, 3-60, 3-61, 3-66, 3-71, 3-72, 4-8, 4-31, 4-	decision process concerning 1-1, 1-2, 1-3
34, 4-38, 4-42, 4-51, 4-52, 4-56, 4-58, 4-61, 5-	description 1-12, 1-13, 1-14
1, 5-6, 5-7, 5-8	energy research 1-11
environmental permits 3-68, 4-47, 5-1, 5-2, 5-5,	environmental review 1-3, 4-14, 4-47, 4-57, 5-
5-6, 5-7, 5-8, 5-9, 5-11, 5-12	6
	fuel element 1-18, 1-19, 2-1, 2-2, 2-20, 2-26, 2-
F	27, 3-24, 3-50, 3-52, 3-53, 3-69, 4-26, 4-27, 4-
Federal Facilities Compliance Act (FFCA) 5-	36, 4-45, 4-46, 4-47, 4-55, 4-61
3	importance of 1-13, 1-14, 1-15
fossils 3-42	location of 1-11
	medical uses 1-15, 1-16
G	modifications to 1-1, 1-5, 2-1, 2-2, 2-5, 2-6, 2-
geology 3-1, 3-5, 3-26, 3-42, 3-44, 3-26, 4-14	7, 2-14, 4-7, 4-10, 4-24, 4-31, 5-4, 5-5
groundwater	operation of 1-2, 1-6, 1-14, 1-19, 1-21, 1-22, 1-
aquifer under BNL, description of 3-13, 3-17	23, 1-24, 1-26, 2-22
contamination 1-2, 1-4, 1-5, 1-23, 1-24, 2-5, 2-	physical plant 1-18, 1-19, 1-20, 1-21, 3-7
8, 2-9, 3-18, 3-19, 3-20, 3-21, 3-22, 3-24, 4-	research at 1-9, 1-12, 1-13, 1-14, 1-15, 1-16,
11, 4-53, 4-54, 4-55, 5-3	1-17, 1-18, 1-21
defined 3-12	spent fuel storage pool 1-2, 1-5, 1-22, 1-23, 1-
extraction system 1-25, 3-21, 3-24	24, 1-25, 1-26, 2-1, 2-4, 2-7, 2-8, 2-9, 2-10, 2-
flow/flowpath 1-24, 1-25, 3-19, 3-22, 3-24, 3-	26, 3-11, 3-22, 3-23, 3-24, 3-52, 3-57, 3-65,
27	3-69, 3-70, 4-10, 4-26, 4-42, 4-46, 4-48, 4-53,
modeling 1-25, 3-22	4-54, 4-55, 5-3
monitoring wells 1-25, 1-27, 3-20, 3-22, 4-10,	users 1-13, 2-3, 3-5
4-11, 4-12, 5-11	historic resources 3-42, 5-2
protection of 1-4, 2-5, 2-6, 2-7, 2-9, 3-61, 4-10	hot lab 1-9, 2-7, 3-58
pumping of 1-25, 1-26, 3-21, 3-24	
regulations protecting 5-11, 5-12	I
sampling 1-23, 1-24, 1-25, 3-21, 3-22, 5-3	industrial waste 1-8, 3-69, 3-71, 4-45, 4-46, 4-47,
tritium discovered in 1-2, 1-23, 1-24, 3-65, 4-	4-48, 4-59
59, 5-3	industry 1-12, 3-66

infrastructure 1-9, 3-1, 3-5, 3-8, 4-3, 4-4, 4-5, 4-6 Operable Units (OUs) 1-5 OU I 3-17, 3-18, 3-19 J.K OU III 1-2, 1-5. 1-25, 1-26, 1-27, 3-18, 3-19-No entries 3-20, 3-21, 3-22, 3-25, 4-10, 4-11, 4-12, 5-3 OU VI 3-17, 3-18, 3-19, 3-21, 3-22 OU V 3-18, 3-21 land use 2-11, 3-1, 3-2, 3-3, 3-4, 3-50, 4-2, 5-11 location of the Maximally Exposed Individual (MEI) 3-57, 3-58 paleontological resources 3-42, 3-44, 4-19 Pine Barrens 3-5, 3-6, 3-12, 3-33, 3-35, 3-38, 5-Long Island Railroad (LIRR) 3-7, 3-11 low-level mixed waste (LLMW) 1-7, 1-8 pollution prevention 3-68, 3-69, 4-38, 4-55 low-level waste (LLW) 1-7, 1-8, 2-26, 2-27, 3-69, 3-70, 4-45, 4-46, 4-47, 4-48, 4-49, 4-55, 4-Pollution Prevention Act 5-7 56, 4-57, 4-58, 5-8 prehistoric resources 3-42 probabilistic risk assessment (PRA) 3-28, 4-29, 4-34, 4-36, 4-39, 4-40, 4-41, 4-43 \mathbf{M} maximally exposed individual (MEI) 2-22, 2-25, public health and safety 3-6, 4-24-4-36, 5-5 public laws 1-1, 1-2, 1-5, 5-2, 5-3, 5-4 3-57, 3-58, 3-59, 4-25, 4-26, 4-27, 4-28, 4-29, 4-30, 4-32, 4-33, 4-34, 4-37, 4-38, 4-52, 4-53, 4-No entries medical research reactor 1-9 mixed waste 1-7, 1-8, 3-69, 3-71, 4-46, 4-47, 4-48, 4-49, 4-55, 4-56, 4-57, 4-58, 5-3, 5-7, 5-10 R radiation exposure limits 2-4, 2-9, 4-13 N levels 3-57, 3-58, 4-42, 4-56 National Ambient Air Quality Standards (*NAAQS*) 3-9, 3-10, 5-5 protection 2-9, 3-63, 5-1, 5-9 National Historic Preservation Act 3-43 sources 3-55, 3-58, 4-30, 4-32, 4-37 National Priorities List (NPL) 3-17, 5-3, 5-6 used in medical research 1-15, 1-16, 1-21 Region of Influence (ROI) National Register of Historic Places (NRHP) 3-42, 3-43, 3-44, 4-23 for environmental justice 3-73 National Synchrotron Light Source (NSLS) 1-9, for geology 3-26 1-12, 3-4 for land use 3-2 Native American resources 3-42–3-43, 3-44 for socioeconomics 2-18, 3-46, 3-47, 3-48, 3-Native American groups or tribes 3-42, 3-43, 5-49, 4-24, 4-25 2 Relativistic Heavy Ion Collider (RHIC) 1-9, 1-Native Americans, legislation concerning 3-43 12, 3-4, 3-8, 4-47, 4-48, 4-49, 4-52, 4-53, 4-53, National Emission Standards for Hazardous 4-54, 4-56, 4-57, 4-58 Air Pollutants (NESHAP) 3-57, 4-52, 5-3, 5-5 Resource Conservation and Recovery Act neutron scattering 1-1, 1-12, 1-13, 1-14, 1-15, 1-(RCRA) 3-71, 5-4, 5-6, 5-7 17 noise 1-4, 2-13, 3-9, 3-10, 3-11, 3-64, 4-7, 4-8, 4-9, 5-5 Savannah River Site (SRS) 1-7, 1-26, 2-1, 3-52, noise, industrial 3-64 3-53, 3-70, 4-26 scoping 1-1, 1-3, 1-4, 2-5 SDWA (Safe Drinking Water Act) 1-23, 1-25, 0 occupational health and safety 1-4, 3-64, 4-29, 5-6 5-2 seismicity 1-4, 2-15, 3-1, 3-26, 4-14

significance threshold 4-44, 4-45, 4-47, 4-50, 4wells, monitoring and extraction 1-2, 1-23, 1-51 24, 1-25, 1-26, 1-27, 1-28, 3-22, 3-24, 3-25 removal action 1-2, 1-26, 1-27, 2-9, 3-22, 4-10, Single Crystal Neutron Diffraction 1-13 Small Angle Neutron Scattering (SANS) 1-13 socioeconomics 1-4, 2-18, 3-46, 4-24 sampling for 1-23, 1-24, 1-25, 3-21, 3-22, 3-55, Spallation Neutron Source (SNS) 1-8, 2-5, 2-31, 5-3 4-48, 4-49, 4-52, 4-53, 4-54, 4-56, 4-57, 4-58 testing for 1-24, 3-22 spent nuclear fuel (SNF) 1-7, 2-20, 2-26, 3-53, usage 1-21, 4-54 3-69, 3-70, 4-26, 4-49 Tritium Remediation Project (TRP) 1-23, 1-25, surface water 1-4, 2-14, 3-1, 3-12, 3-16, 4-10, 4-3-21, 3-22, 3-23, 5-3 11, 4-12, 4-13, 4-20, 5-6 U \mathbf{T} Upton, Camp 1-9, 3-4, 3-7, 3-43, 3-44 Tandem Van de Graaff 1-9 Upton, General Emery 3-43 Upton National Forest 3-43 terrestrial resources 2-15, 3-31, 3-32, 4-16, 4-18, 4-19, 4-20, 4-21 threatened species 3-31, 3-32, 3-39, 3-40, 3-41, 4-15, 4-16, 4-17, 4-18, 4-19, 4-20, 4-21, 5-12 visual resources 2-11, 3-1, 3-2, 3-5, 4-2 transportation 1-4, 1-5, 1-7, 1-8, 2-19, 2-20, 2-21, 3-10, 3-47, 3-49, 3-52, 3-53, 3-50, 4-26, 4-27, 4- \mathbf{W} 28, 4-42, 5-7, 5-9 war transuranic waste (TRU) 1-7 Civil 3-43 tritium Cold 3-42 characterization of plume 1-26, 3-20, 3-22, 5-3 Revolutionary 3-43 cleanup activities 1-5, 3-22, 4-10 World War I 3-43, 3-44 concentration/ levels of 1-2, 1-4, 1-14, 1-22, 1-World War II 1-24, 3-8, 3-43 23, 1-24, 1-25, 1-26, 1-27, 2-14, 2-16, 3-17, 3waste management 1-4, 1-5, 1-7, 1-8, 2-26, 2-27, 21, 3-22, 3-23, 3-24, 3-25, 3-56, 3-57, 4-10, 4-2-28, 2-29, 2-31, 3-1, 3-68, 3-69, 3-70, 4-45, 4-11, 4-12, 4-13, 4-16, 4-18, 4-20, 4-29, 4-30, 4-48, 4-51, 4-55, 4-57, 4-58, 4-59, 5-4, 5-9, 5-12 Waste Management Facility (WMF) 2-1, 3-68, 48, 4-52, 4-53, 4-54, 5-55 Conference Report direction 1-2, 1-5 3-69, 3-70, 3-71, 4-55, 5-4 drinking water standard for 1-23, 1-25, 3-21, water resources 1-4, 3-1, 3-12, 3-17, 3-44, 4-10, 3-23, 3-65, 4-12, 4-16, 4-18, 4-20, 5-3 5-3 elimination of source 1-5, 1-23, 2-5, 2-9, 2-14, wetlands 3-4, 3-5, 3-6, 3-31, 3-32, 3-33, 3-35, 3-3-24, 3-70, 4-13 36, 3-37, 3-38, 3-39, 3-40, 4-16, 4-18, 4-19, 4finding the source 1-23, 1-24, 1-26, 3-22, 3-23, 20, 4-21, 5-6 3-24, 3-55, 4-10, 4-11, 4-12 location in water table 1-24, 1-25, 3-20 X,Y,Zmigration 1-2, 1-27, 3-23, 3-24, 3-25, 5-3 No entries